

REMARKS

Applicants respectfully request reconsideration of the present U.S. patent application. Claims 1-16 stand rejected under 35 U.S.C. § 112 and 35 U.S.C. § 103. Claim 1 has been amended for clarification purposes only. No claims have been canceled or added. Therefore, claims 1-16 remain pending.

Amendment

Claim 1 has been amended for purposes of clarification only, and not to overcome a cited reference.

Claim Rejections - 35 U.S.C. § 112

Claims 1-16 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Specifically, the Examiner asserts that the photodetector receives upward light, in addition to the primary direct light, since there is nothing to reflect the upward light. Claims 1 and 10-13 recite that the photodetector receives primarily direct light, not exclusively direct light. This does not preclude the photodetector from receiving light that is not reflected. Therefore, Applicants respectfully submit that claims 1-16 are not indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Applicants thus respectfully request that the Examiner withdraw the rejection of claims 1-16 under 35 U.S.C. § 112.

Claim Rejections - 35 U.S.C. § 103Rejections of Claims 1-16 based on *Joyce* in view of *Miyashita*

Claims 1-16 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,278,721 issued to Joyce (*Joyce*) and U.S. Patent No. 5,477,325 issued to Miyashita et al.

(*Miyashita*). For at least the reasons set forth below, Applicants submit that claims 1-16 are not rendered obvious by *Joyce* in view of *Miyashita*.

Claim 1 recites the following:

at least one channel formed in the substrate near the face of a light emitting device ...;

Claims 10, 11, 12 and 13 are independent claims that recite a similar limitation.

Joyce discloses a method for at least minimizing the locking range variability of laser modules that employ external grating such as fiber bragg gratings. See col. 1, lines 36-39. Applicants agree with Examiner that *Joyce* fails to disclose a channel formed in a substrate. See Office Action, page 3, line 8. However, Examiner asserts, in particular by referring to Fig. 4(c), that *Miyashita* discloses a channel formed in a substrate. See Office Action, page 3, line 9.

Miyashita discloses a method for evaluating a semiconductor layer epitaxially growing on a substrate. See col. 3, lines 41-42; col. 5, lines 37-39. A substrate includes a test element group (TEG), which is a periodic pattern of stripe-shaped grooves, and stripe-shaped ridges between the grooves. See col. 5, lines 40-51; col. 6, lines 4-6. The width and height of a stripe-shaped ridge are adjusted so that the TEG is completely buried by an epitaxially grown layer when the semiconductor layer attains a desired thickness. See col. 6, lines 6-10. When the TEG is completely buried and the surface of the semiconductor layer becomes flat, whereby the desired thickness is obtained, epitaxial growth of the semiconductor layer stops. See Figs. 3(a)-3(c), 4(a)-4(c), 5(a)-(b); col. 6, lines 18-25.

Fig. 4(c) illustrates formation of triangular portions on the stripe-shaped ridges of the TEG. See Fig. 4(c); col. 7, lines 5-11. These triangular portions, along with the stripe-shaped grooves in the substrate, are gradually embedded by the growing semiconductor layer, and when they are completely embedded, the surface of the semiconductor layer is flat and epitaxial growth stops. See Fig. 4(c); col. 7, lines 20-33. Because the triangular portions and the stripe-shaped

grooves are completely embedded, they are not part of the epitaxial layer grown on the substrate. Consequently, to the extent that the Examiner asserts that the triangular portions and stripe-shaped grooves in Fig. 4(c) constitute channels, Miyashita in fact does not disclose a channel formed in a substrate. Therefore, *Miyashita* fails to cure the deficiencies of *Joyce*. As a result, claims 1, 10, 11, 12 and 13 are not rendered obvious by *Joyce* in view of *Miyashita* for at least the reasons set forth above. Applicants therefore respectfully request that the Examiner withdraw the rejection of claims 1, 10, 11, 12 and 13 under 35 U.S.C. § 103.


Claims 2-9 depend from claim 1. Claims 14-16 depend from claim 13. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 2-9 and 14-16 are not rendered obvious by *Joyce* in view of *Miyashita* for at least the reasons set forth above.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 1-16 are in condition for allowance and such action is respectfully solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Respectfully submitted,

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